at one time, the number being limited only by the relative size of the work and the table.

The second or vertical part of the machine is totally unconnected with the first, and is composed of a strong bridge or girder fixed between columns and across the centre of the lower railway. It carries a vertical slide, having a bottom-bar, to which any required number of cutter-mandrils may be attached: one of the mandrils is fixed exactly over the centre of each piece of work, and a tracer or feeler is similarly fixed over the pattern. The slightest pressure from the workman's foot on a treadle lifts this system of cutters and their tracers off the work, and by a pair of hand-wheels attached to the horizontal or "floating-table," he can move this about in any direction, so as to bring every part of the pattern under the tracer in succession, and by the time he has done this, the cutters which have necessarily been passing over similar forms, and which have been spinning round all the time, at an enormous rate, by the power of steam, have each cut away all the superfluities of its own block, and each produced its own copy of the original pattern.

In this way, from four to six copies are produced simultaneously, and they are all so closely "bosted" as scarcely to require after-finishing, if fixed at ten or twelve feet from the eye. Of course, any amount of finish can be given to the work afterwards by hand, with comparatively small labour; the time of the skilful artist is thus economized, and the beauty of the work may therefore be increased, while both the time and cost of production is greatly reduced. Several of these machines have been in use at the Government works, Thames bank, for the last eighteen months, and their efficiency cannot be better proved than by the splendid work which they have so greatly assisted in executing.

LEAVES FROM AN ARCHITECT'S DIARY.

No. V.

IMPROVEMENT OF ARCHITECTURE—PROFESSORS OF ARCHITECTURE NOT CONSULTED—LONDON STREETS—BRIGHTON.

It would tend much to the improvement of architecture, if, where positive excellence could not be obtained, the desire for decoration could be altogether prevented. By such excellence is meant, not necessarily a character of design, that might be described as ornamental, nor perfection—which is impossible—but merely that arrangement of forms, simple or otherwise, which in the hands of the master, is alone capable of elevating the subject to the rank of a work of art. Critics may differ on points, which nevertheless, if they are honest, they must say, at least admit of being matter of argument; and there is one architect, whose variations on details become the subject of discussion, whenever the opportunity is afforded, whilst they are evidence to all, of the cultivated taste, universally allowed to their author. That,—

> "A perfect Judge will read each work of wit
> With the same spirit that its author writ:
> Survey the whole, nor seek slight faults to find,"

is worth preserving in the recollection of critics of the works of architecture.

> "Thus, when we view some well-proportioned dome,
> * * * *
> No single parts unequally surprise,—
> All comes united to the admiring eyes;
> No monstrous height, or breadth, or length, appear;
> The whole at once is bold and regular."

The treatment of the design may be debateable, but the perfect success of the effort must be exacted. The opportunity, or the means may be slight;—details, however open to comment, may be admitted, if they have the shew of reason.

> "In every work regard the writer's end,
> Since none can compass more than they intend;
> And if the means be just, the conduct true,
> Applause, in spite of trivial faults, is due.

but the evidence of a *failure* is intolerable in all art.

But, it is this very principle, clearly present to the lovers of every other art, which is not applied in what pass with the public as works of architecture—from the greater part of which, as we have already shewn, the world, let it be recollected by architects, forms its opinion of the value of professional attainments and labours,—it being singularly unfortunate, that the profession is constantly brought before notice, when works are under consideration over which it has been allowed no influence, yet forgotten in whatever could be traced to the cultivated judgment of the artist.

The author of "Tancred," the proposer of a new penal code for the better regulation of metropolitan buildings, if just, would find his culprit in the ranks of the professors of architecture, with some difficulty, but might take, say his own intimate friend, without fear of punishing the innocent. If scarcely one street in London is creditable to the nation, clearly those are to blame who projected the streets, and designed the buildings, not ARCHITECTS, whose opinion is generally not attended to, and is, in only about one case in a thousand, asked. The degradation of architecture would have its parallel, in any branch of ingenuity, that had its practice in the hands of any, rather than its professors, which is the case in this art. People don't go to have a surgical operation performed by a lawyer, or even a druggist; but the mere fact of having turned over a few plates of the orders is supposed to confer education, taste,—in fact, a capability for practising, and advising in, the art, even though the man call himself a plasterer. But, Mr. D'Israeli is far ahead of the world in general; he knows there is an art called architecture; he knows also that there are architects; his two next steps will be important ones, and powerfully aid the object he contemplates; first he may tell the world to make some use of architects; afterwards he may do something to aid it in discriminating between the true and the false. Meanwhile, if he would "baog" any body who draws inferences without knowing facts, the world and architecture would be gainers. People would apply to those whose lives are devoted to the art, and any accidental lapses might then be laid to their charge with justice.

But returning to the course of argument before opened, this necessity in the existence of real art, namely, perfect success according to the effort, something that, be the opportunities what they may, suggests no idea of failure—has far too little influence in architecture. Far from any thing like that perfection, which the merely momentary touches of an accomplished painter would exhibit, there are few buildings, from which the first impression is not that of a deficiency. It is the great error of the ignorant in art, to attempt every thing, and not estimate the means. Where stone cannot be had, they publish the deficiency by means of ill-executed stucco; where careful design and proportion are found troublesome, they

> "hide with ornaments their want of art;"

in fine, where cultivated taste and the architect is wanting, they merely make the deficiency more observable, by courting all the difficulties of the art. Baker-street and Harley-street may be plain, and not worthy of a metropolis, but they are at least not failures; they attempt very little, but succeed better than a hundred other streets, assumed to possess more architectural character; they do no injury to the art, and at least do not shock the eye of the artist. If, therefore, the world will not apply to the properly qualified person, by all means let them adhere to the model of Baker-street, as on the whole likely to do less injury.

—The terraces at Brighton are most remarkable instances of what has been above stated. With a world of trouble, make-believe, and extravagant outlay, there is but one small house which can be justly entitled a meritorious work of architecture. Here is one of those "fine sites," which we are constantly—not even contenting ourselves with *throwing away*, —using so as to disgust every lover and qualified judge of good architecture. Would it not have been far better for the art, had mere brick or stone, pierced with holes for doors and windows, been raised in façades of houses, than that all this cement and sand should have been heaped up, without one feature on which the eye can find delight. It cannot be possible, that more than two of these designs at most, have emanated from architects. Obvious treatment, and coincidence, are alike against such a notion. Now, what fact could tell like this for the inexplicable system, which appears to rule in the design of buildings. Here is one instance of what is to be noticed in every watering-place, to which the world of London "must do congregate," and is seen in every town in England, the capital not excepted. Here and there, at long distances, we find some good specimen of architecture, but the mass of structures, are discreditable to every body, and the more so from their attempted claim to rank as high works of art. Whilst the love of art is extending, so that scarcely any house does not contain some meritorious work of painting or sculpture, men of education and reputed taste will directly contribute to the hindrance of architectural improvement, and this by nourishing a system directly opposed to reason, and ordinary sense. Surely, if the "educated" and the ignorant, are thus alike, would it not be in the power of architects to remove this deficiency, to educate the public in what is alike for the interest, and the delight of all.

ERECTIONS ON ROOFS IN THE METROPOLIS.

CURIOUS CASE.

Mr. Godwin, architect, on the part of an employer, submitted the following requisition to the referees, March 2nd, 1847:—

"With regard to a certain dwelling-house, situate and being No. 122, Regent-street, in the district of St. James, Westminster. Whereas it is proposed to set up on the flat or roof of the said house, a glass inclosure for plants, or for taking portraits in the photographic way,—such erection being of incombustible materials, and as shewn by the annexed drawings.* And whereas, on the matter above described being made known to Mr. Charles Mayhew, the surveyor to the district, he, the said Charles Mayhew, has objected to the inclosure in question, on the ground that as the attics of the said dwelling-house are in the roof, and schedule K provides that 'with regard to rooms in the roof of any building hereafter built or rebuilt, in reference to the number of floors of rooms in the roofs,' there must not be more than one floor of such rooms,—it will be contrary to the said Act to put up the inclosure in question.

Now I, the said Geo. Godwin, do hereby refer the matter to the said official referees, and request them by their award to determine whether it will be contrary to the rules and directions of the said Act to set up the inclosure shewn by the said drawings, and to give such directions thereon as to them the matter shall seem to require; and I beg leave to make the following remarks in reply to the objection raised by the district surveyor, which objection I consider to be groundless.

The schedule cited by the district surveyor applies only to buildings 'hereafter built or rebuilt.' Even, however, if this could be made to apply to the 'already built' house in question—no alteration is proposed to be made in the number of floors or rooms in the roof of the said house—the proposed glass inclosure is to be set up on the flat, quite independent of it,—and as I respectfully maintain, is an erection in no way referred to in the schedule in question.

Schedule G provides, with regard to roof coverings, that 'if the external parts 'of any turret, dormer, lanthorn light, and other erection on the roof or flat of any building, be hereafter built or rebuilt, stripped, ripped, or uncovered, then every such part (except the door-frames and doors, window-frames and sashes of such turrets, dormers, lanthorn lights, or other erections), must be covered with slates, tiles, metal, glass, artificial stone or cement, and such excepted parts may be made of such wood as shall be necessary,'—thus

* The drawing shewed an inclosure of zinc and glass, 18 feet by 10 feet, placed 4 inches from the north party-wall and 4 feet from the south wall, but it was stated in words on the drawing, that it would "be placed nearer midway between the walls than as shewn."

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